

147. A method of claim 145, wherein the virus is administered systemically or at a site other than directly into a tumor of said cancer.

148. A method of claim 145, wherein the virus is administered locally into a tumor of said cancer.

149. A method of claim 145, wherein said amount of virus is at least  $4 \times 10^8$  PFU/kg.

150. A method of claim 149, wherein said amount of virus is administered locally into a tumor of said cancer.

151. A method of claim 145, wherein said amount of virus is at least  $4 \times 10^9$  PFU/kg.

152. A method of claim 151, wherein said amount of virus is administered systemically.

153. A method of claim 145, wherein multiple doses of said virus is administered.

154. A method of claim 145, further comprising administering radiation or a chemotherapeutic agent.

155. A method of claim 154, wherein the chemotherapeutic agent has anti-cancer, immune-enhancing, or virus-enhancing activity.

156. A method of claim 145, wherein said virus is substantially free of red blood cell membranes.

157. A method of claim 145, wherein said virus is free of tumor cells or tumor cell components.

158. A method of claim 145, wherein said virus is strain M.

159. A method of claim 145, wherein said virus is genetically-engineered.

C1  
confid

160. A method of claim 145, wherein said virus is not 73-T.

161. A method of claim 145, wherein said virus is not 1E10.

162. A method of claim 145, wherein said virus treats cancer without the presence of toxic sequelae.

163. A method of claim 145, wherein the cancer is a carcinoma, sarcoma, fibrosarcoma, synovial sarcoma, colon carcinoma, breast carcinoma, prostate carcinoma, lung carcinoma, cervical carcinoma, neuroblastoma, glioblastoma, or melanoma.

164. A method of treating cancer in a mammal having cancer comprising administering systemically to said mammal a Newcastle disease virus in an amount which alone is cytolytic to said cancer and results in regression of a tumor of said cancer.

165. A method of claim 164, wherein said cancer is a solid tumor.

166. A method of claim 164, wherein said mammal is a human.

167. A method of claim 164, wherein said amount of virus is at least  $4 \times 10^8$  PFU/kg.

168. A method of claim 164, wherein said amount of virus is at least  $4 \times 10^9$  PFU/kg.

169. A method of claim 164, wherein multiple doses of said virus is administered.

170. A method of claim 164, further comprising administering radiation or a chemotherapeutic agent.

171. A method of claim 164, wherein said virus is substantially free of red blood cell membranes.

172. A method of claim 164, wherein said virus is free of tumor cells or tumor cell

components.

173. A method of claim 164, wherein said virus is strain M.

174. A method of claim 164, wherein said virus is genetically-engineered.

175. A method of claim 164, wherein said virus is not 73-T.

176. A method of claim 164, wherein said virus is not 1E10.

177. A method of claim 164, wherein the cancer is a carcinoma, sarcoma, fibrosarcoma, synovial sarcoma, colon carcinoma, breast carcinoma, prostate carcinoma, lung carcinoma, cervical carcinoma, neuroblastoma, glioblastoma, or melanoma.

178. A method of treating cancer in a mammal having cancer comprising administering to said mammal an amount of Newcastle disease virus and radiation or a chemotherapeutic agent, wherein the amount of virus is alone cytolytic to said cancer and results in regression of a tumor of said cancer.

179. A method of claim 178, wherein said cancer is a solid tumor.

180. A method of claim 178, wherein said mammal is a human having cancer.

181. A method of claim 180, wherein said amount of virus is at least  $4 \times 10^8$  PFU/kg.

182. A method of claim 181, wherein said virus is administered locally into a tumor of said cancer.

183. A method of claim 180, wherein said amount of virus is at least  $4 \times 10^9$  PFU/kg.

184. A method of claim 183, wherein said virus is administered systemically.

185. A method of claim 180, wherein said virus is administered systemically.
186. A method of claim 180, wherein multiple doses of said virus is administered.
187. A method of claim 180, wherein said virus is substantially free of red blood cell membranes.
188. A method of claim 180, wherein said virus is free of tumor cells or tumor cell components.
189. A method of claim 180, wherein said virus is strain M.
190. A method of claim 180, wherein said virus is genetically-engineered.
191. A method of claim 180, wherein said virus is not 73-T.
192. A method of claim 180, wherein said virus is not 1E10.
193. A method of claim 180, wherein the cancer is a carcinoma, sarcoma, fibrosarcoma, synovial sarcoma, colon carcinoma, breast carcinoma, prostate carcinoma, lung carcinoma, cervical carcinoma, neuroblastoma, glioblastoma, or melanoma.
194. A method of treating cancer in a mammal having cancer comprising administering to said mammal a Newcastle disease virus in an amount which alone is cytolytic to said cancer and results in regression of a tumor of said cancer, wherein said virus is administered in multiple doses.
195. A method of claim 194, wherein said cancer is a solid tumor.
196. A method of claim 194, wherein said mammal is a human.
197. A method of claim 196, wherein said amount of virus is at least  $4 \times 10^8$  PFU/kg.

198. A method of claim 197, wherein said virus is administered locally into a tumor of said cancer.

199. A method of claim 196, wherein said amount of virus is at least  $4 \times 10^9$  PFU/kg.

200. A method of claim 199, wherein said virus is administered systemically.

201. A method of claim 196, wherein said virus is administered systemically.

202. A method of claim 196, further comprising administering radiation or a chemotherapeutic agent.

203. A method of claim 196, wherein said virus is substantially free of red blood cell membranes.

204. A method of claim 196, wherein said virus is free of tumor cells or tumor cell components.

205. A method of claim 196, wherein said virus is strain M.

206. A method of claim 196, wherein said virus is genetically-engineered.

207. A method of claim 196, wherein said virus is not 73-T.

208. A method of claim 196, wherein said virus is not 1E10.

209. A method of claim 196, wherein the cancer is a carcinoma, sarcoma, fibrosarcoma, synovial sarcoma, colon carcinoma, breast carcinoma, prostate carcinoma, lung carcinoma, cervical carcinoma, neuroblastoma, glioblastoma, or melanoma.

210. A method of treating cancer in a mammal having cancer comprising administering to said mammal a Newcastle disease virus in an amount which alone is cytolytic to said cancer and results in regression of a tumor of said cancer, wherein said virus is not 73-T.

211. A method of claim 210, wherein said cancer is a solid tumor.

212. A method of claim 210, wherein said mammal is a human.

213. A method of claim 212, wherein said amount of virus is at least  $4 \times 10^8$  PFU/kg.

214. A method of claim 213, wherein said virus is administered locally into a tumor of said cancer.

215. A method of claim 212, wherein said amount of virus is at least  $4 \times 10^9$  PFU/kg.

216. A method of claim 215, wherein said virus is administered systemically.

217. A method of claim 212, wherein said virus is administered systemically.

218. A method of claim 212, wherein said virus is administered in multiple doses.

219. A method of claim 212, further comprising administering radiation or a chemotherapeutic agent.

220. A method of claim 212, wherein said virus is substantially free of red blood cell membranes.

221. A method of claim 212, wherein said virus is free of tumor cells or tumor cell components.

222. A method of claim 212, wherein said virus is strain M.

223. A method of claim 212, wherein said virus is genetically-engineered.
224. A method of claim 212, wherein said virus is not 1E10.
225. A method of claim 212, wherein the cancer is a carcinoma, sarcoma, fibrosarcoma, synovial sarcoma, colon carcinoma, breast carcinoma, prostate carcinoma, lung carcinoma, cervical carcinoma, neuroblastoma, glioblastoma, or melanoma.
226. A method of treating cancer in a mammal having cancer comprising administering to said mammal locally into a tumor of said cancer a Newcastle disease virus in an amount which alone is cytolytic to said cancer, and administering radiation or a chemotherapeutic agent.
227. A method of claim 226, wherein said cancer is a solid tumor.
228. A method of claim 226, wherein said mammal is a human.
229. A method of claim 228, wherein said amount of virus results in regression of said cancer.
230. A method of claim 229, wherein said amount of virus is at least  $4 \times 10^8$  PFU/kg.
231. A method of claim 229, wherein said amount of virus is at least  $4 \times 10^9$  PFU/kg.
232. A method of claim 229, wherein said virus is administered in multiple doses.
233. A method of claim 229, wherein said virus is substantially free of red blood cell membranes.
234. A method of claim 229, wherein said virus is free of tumor cells or tumor cell components.

235. A method of claim 229, wherein said virus is strain M.

236. A method of claim 229, wherein said virus is genetically-engineered.

237. A method of claim 229, wherein said virus is not 73-T.

238. A method of claim 229, wherein said virus is not 1E10.

239. A method of claim 229, wherein the cancer is a carcinoma, sarcoma, fibrosarcoma, synovial sarcoma, colon carcinoma, breast carcinoma, prostate carcinoma, lung carcinoma, cervical carcinoma, neuroblastoma, glioblastoma, or melanoma.

240. A method of treating cancer in a mammal having cancer comprising administering to said mammal locally into a tumor of said cancer a Newcastle disease virus in an amount which alone is cytolytic to said cancer, wherein the virus is administered in multiple doses.

241. A method of claim 240, wherein said cancer is a solid tumor.

242. A method of claim 240, wherein said mammal is a human.

243. A method of claim 242, wherein said amount of virus results in regression of said cancer.

244. A method of claim 243, wherein said amount of virus is at least  $4 \times 10^8$  PFU/kg.

245. A method of claim 243, wherein said amount of virus is at least  $4 \times 10^9$  PFU/kg.

246. A method of claim 243, further comprising administering radiation or a chemotherapeutic agent.



247. A method of claim 243, wherein said virus is substantially free of red blood cell membranes.

248. A method of claim 243, wherein said virus is free of tumor cells or tumor cell components.

249. A method of claim 243, wherein said virus is strain M.

250. A method of claim 243, wherein said virus is genetically-engineered.

251. A method of claim 243, wherein said virus is not 73-T.

252. A method of claim 243, wherein said virus is not 1E10.

253. A method of claim 243, wherein the cancer is a carcinoma, sarcoma, fibrosarcoma, synovial sarcoma, colon carcinoma, breast carcinoma, prostate carcinoma, lung carcinoma, cervical carcinoma, neuroblastoma, glioblastoma, or melanoma.

254. A method of treating cancer in a mammal having cancer comprising administering to said mammal locally into a tumor of said cancer a Newcastle disease virus in an amount which alone is cytolytic to said cancer, wherein the virus is not 73-T.

255. A method of claim 254, wherein said cancer is a solid tumor.

256. A method of claim 254, wherein said mammal is a human.

257. A method of claim 256, wherein said amount of virus results in regression of said cancer.

258. A method of claim 257, wherein said amount of virus is at least  $4 \times 10^8$  PFU/kg.

259. A method of claim 257, wherein said amount of virus is at least  $4 \times 10^9$  PFU/kg.

260. A method of claim 257, wherein said virus is administered in multiple doses

261. A method of claim 257, further comprising administering radiation or a chemotherapeutic agent.

262. A method of claim 257, wherein said virus is substantially free of red blood cell membranes.

263. A method of claim 257, wherein said virus is free of tumor cells or tumor cell components.

264. A method of claim 257, wherein said virus is strain M.

265. A method of claim 257, wherein said virus is genetically-engineered.

266. A method of claim 257, wherein said virus is not 1E10.

267. A method of claim 257, wherein the cancer is a carcinoma, sarcoma, fibrosarcoma, synovial sarcoma, colon carcinoma, breast carcinoma, prostate carcinoma, lung carcinoma, cervical carcinoma, neuroblastoma, glioblastoma, or melanoma.

268. A method of treating cancer in a mammal having cancer comprising administering to said mammal at least  $4 \times 10^8$  PFU/kg of a Newcastle disease virus, which amount is alone is cytolytic to said cancer, and administering radiation or a chemotherapeutic agent.

269. A method of claim 268, wherein said cancer is a solid tumor.

270. A method of claim 268, wherein said mammal is a human.

271. A method of claim 270, wherein said amount of virus results in regression of said cancer.

272. A method of claim 271, wherein said amount of virus is at least  $4 \times 10^9$  PFU/kg.

273. A method of claim 271, wherein said virus is administered locally.

274. A method of claim 271, wherein said virus is administered systemically.

275. A method of claim 271, wherein said virus is administered in multiple doses.

276. A method of claim 271, wherein said virus is substantially free of red blood cell membranes.

277. A method of claim 271, wherein said virus is free of tumor cells or tumor cell components.

278. A method of claim 271, wherein said virus is strain M.

279. A method of claim 271, wherein said virus is genetically-engineered.

280. A method of claim 271, wherein said virus is not 73-T.

281. A method of claim 271, wherein said virus is not 1E10.

282. A method of claim 271, wherein the cancer is a carcinoma, sarcoma, fibrosarcoma, synovial sarcoma, colon carcinoma, breast carcinoma, prostate carcinoma, lung carcinoma, cervical carcinoma, neuroblastoma, glioblastoma, or melanoma.

283. A method of treating cancer in a human having cancer comprising administering systemically to said human at least  $4 \times 10^8$  PFU/kg of a Newcastle disease virus, which amount is alone is cytolytic to said cancer.

284. A method of claim 283, wherein said amount of virus results in regression of said cancer.

285. A method of claim 284, wherein said amount of virus is at least  $4 \times 10^9$  PFU/kg.

286. A method of claim 284, wherein said virus is administered in multiple doses.

287. A method of claim 284, further comprising administering radiation or a chemotherapeutic agent.

288. A method of claim 284, wherein said virus is substantially free of red blood cell membranes.

289. A method of claim 284, wherein said virus is free of tumor cells or tumor cell components.

290. A method of claim 284, wherein said virus is strain M.

291. A method of claim 284, wherein said virus is genetically-engineered.

292. A method of claim 284, wherein said virus is not 73-T.

293. A method of claim 284, wherein said virus is not 1E10.

294. A method of claim 284, wherein the cancer is a carcinoma, sarcoma, fibrosarcoma, synovial sarcoma, colon carcinoma, breast carcinoma, prostate carcinoma, lung carcinoma, cervical carcinoma, neuroblastoma, glioblastoma, or melanoma.

295. A method of treating cancer in a human having cancer comprising administering to said human at least  $4 \times 10^8$  PFU/kg of a Newcastle disease virus, which amount is alone is cytolytic to said cancer, wherein the virus is administered in multiple doses.

296. A method of claim 295, wherein said amount of virus results in regression of said cancer.

297. A method of claim 296, wherein said amount of virus is at least  $4 \times 10^9$  PFU/kg.
298. A method of claim 296, wherein said virus is administered systemically.
299. A method of claim 296, wherein said virus is administered locally.
300. A method of claim 296, further comprising administering a chemotherapeutic or radiotherapeutic agent.
301. A method of claim 296, wherein said virus is substantially free of red blood cell membranes.
302. A method of claim 296, wherein said virus is free of tumor cells or tumor cell components.
303. A method of claim 296, wherein said virus is strain M.
304. A method of claim 296, wherein said virus is genetically-engineered.
305. A method of claim 296, wherein said virus is not 73-T.
306. A method of claim 296, wherein said virus is not 1E10.
307. A method of claim 296, wherein the cancer is a carcinoma, sarcoma, fibrosarcoma, synovial sarcoma, colon carcinoma, breast carcinoma, prostate carcinoma, lung carcinoma, cervical carcinoma, neuroblastoma, glioblastoma, or melanoma.

#### REMARKS

The pending claims have been canceled and replaced by the foregoing new claims. Applicants apologize for the extensive revisions (and possible inconvenience in this regard to the examiner); however, the new references cited for the first time in the Information Disclosure Statement filed March 18, 1996, required a re-analysis of the complicated